63.4165, and 63.4166; results of liquid-liquid material balances conducted according to §63.4161(h); calculations according to §63.4161 and supporting documentation showing that, during the initial compliance period, the organic HAP emission rate was equal to or less than the emission limit in §63.4090(b); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.4168; and documentation of whether you developed and implemented the work practice plan required by §63.4093.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.4092 until after you have completed the performance tests specified in paragraph (b)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (b)(1) of this section. This requirement does not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4161(h).

§63.4161 How do I demonstrate initial compliance?

You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation(s) in the affected source for which you do not use this option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limit in §63.4090 and the work practice standards required in §63.4093; and each controlled coating operation must meet the operating limits required in §63.4092. You must meet all the requirements of this section to demonstrate initial compliance with the emission limitations. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners, or cleaning materials that have been reclaimed onsite and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

(a) Except as provided in §63.4160(b)(4) and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of §63.4161(h), you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.4092, using the procedures specified in §§63.4167 and 63.4168.

(b) You must develop, implement, and document your implementation of the work practice plan required by §63.4093 during the initial compliance period as specified in §63.4130.

(c) You must follow the procedures in paragraphs (d) through (l) of this section to demonstrate compliance with the applicable emission limit in §63.4090.

(d) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in §63.4151(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner, and cleaning material used during the compliance period, and the volume fraction of coating solids for each coating used during the compliance period.

(e) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of §63.4151, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners, and cleaning materials used during the compliance period

in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(f) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during the compliance period. The emissions reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in paragraph (g) of this section to calculate the mass of organic HAP emissions reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (h) of this section to calculate the organic HAP emissions reduction.

(g) *Calculate the organic HAP emissions reduction for controlled coating operations not using liquid-liquid material balance.* For each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate organic HAP emissions reduction, using Equation 1 of this section, by applying the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during the compliance period. For any period of time a deviation specified in §63.4163(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, you must assume zero efficiency for the emission capture system and add-on control device. For the purposes of completing the compliance calculations, you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation. You must not include those materials in the calculations of organic HAP emissions reduction in Equation 1 of this section.

$$H_c = \left(A_I + B_I + C_I\right)\left(\frac{CE}{100} \times \frac{DRE}{100}\right) \qquad \text{(Eq. 1)}$$

Where:

H_C = mass of organic HAP emissions reduction for the controlled coating operation during the compliance period, kg.

A_I = total mass of organic HAP in the coatings used in the controlled coating operation, kg, as calculated in Equation 1A of this section.

B_I = total mass of organic HAP in the thinners used in the controlled coating operation, kg, as calculated in Equation 1B of this section.

C_I = total mass of organic HAP in the cleaning materials used in the controlled coating operation during the compliance period, kg, as calculated in Equation 1C of this section.

CE = capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§63.4164 and 63.4165 to measure and record capture efficiency.

DRE = organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§63.4164 and 63.4166 to measure and record the organic HAP destruction or removal efficiency.

(1) Calculate the kg of organic HAP in the coatings used in the controlled coating operation, using Equation 1A of this section:

$$A_I = \sum_{i=1}^{m}\left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Eq. 1A)}$$

Where:

A_I = mass of organic HAP in the coatings used in the controlled coating operation, kg.
$Vol_{c,i}$ = total volume of coating, i, used, liters.
$D_{c,i}$ = density of coating, i, kg per liter.
$W_{c,i}$ = mass fraction of organic HAP in coating, i, kg per kg.
m = number of different coatings used.

(2) Calculate the kg of organic HAP in the thinners used in the controlled coating operation, using Equation 1B of this section:

$$B_I = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad \text{(Eq. 1B)}$$

Where:

B_I = mass of organic HAP in the thinners used in the controlled coating operation, kg.
$Vol_{t,j}$ = total volume of thinner, j, used, liters.
$D_{t,j}$ = density of thinner, j, kg per liter.
$W_{t,j}$ = mass fraction of organic HAP in thinner, j, kg per kg.
n = number of different thinners used.

(3) Calculate the kg of organic HAP in the cleaning materials used in the controlled coating operation during the compliance period, using Equation 1C of this section:

$$C_I = \sum_{k=1}^{P} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad \text{(Eq. 1C)}$$

Where:

C_I = mass of organic HAP in the cleaning materials used in the controlled coating operation, kg.
$Vol_{s,k}$ = total volume of cleaning material, k, used, liters.
$D_{s,k}$ = density of cleaning material, k, kg per liter.
$W_{s,k}$ = mass fraction of organic HAP in cleaning material, k, kg per kg.
p = number of different cleaning materials used.

(h) *Calculate the organic HAP emissions reduction for controlled coating operations using liquid-liquid material balance.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the coating operation controlled by the solvent recovery system during the compliance period. Perform a liquid-liquid material balance for each compliance period as specified in paragraphs (h)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (h)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each compliance period. The device must be initially certified by the manufacturer to be accurate to within ±2.0 percent of the mass of volatile organic matter recovered.

(2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the compliance period, kg, based on measurement with the device required in paragraph (h)(1) of this section.

(3) Determine the mass fraction of volatile organic matter for each coating used in the coating operation controlled by the solvent recovery system during the compliance period, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will govern.

(4) Determine the density of each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the compliance period, kg per liter, according to § 63.4151(c).

(5) Measure the volume of each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the compliance period, liters.

(6) Calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2 of this section:

$$R_v = 100 \frac{M_{VR}}{\sum_{i=1}^{m} Vol_i D_i C_{Vi} + \sum_{j=1}^{n} Vol_j D_j + \sum_{k=1}^{p} Vol_k D_k} \quad \text{(Eq. 2)}$$

Where:

R_V = volatile organic matter collection and recovery efficiency of the solvent recovery system during the compliance period, percent.

M_{VR} = mass of volatile organic matter recovered by the solvent recovery system during the compliance period, kg.

Vol_i = volume of coating, i, used in the coating operation controlled by the solvent recovery system during the compliance period, liters.

D_i = density of coating, i, kg coating per liter coating.

C_{Vi} = mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating.

Vol_j = volume of thinner, j, used in the coating operation controlled by the solvent recovery system during the compliance period, liters.

D_j = density of thinner, j, kg thinner per liter thinner.

Vol_k = volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the compliance period, liters.

D_k = density of cleaning material, k, kg cleaning material per liter cleaning material

m = number of different coatings used in the coating operation controlled by the solvent recovery system during the compliance period.

n = number of different thinners used in the coating operation controlled by the solvent recovery system during the compliance period.

p = number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the compliance period.

(7) Calculate the mass of organic HAP emissions reduction for the coating operation controlled by the solvent recovery system during the compliance period, using Equation 3 of this section:

$$H_{CSR} = \left(A_I + B_I + C_I\right)\left(\frac{R_V}{100}\right) \quad \text{(Eq. 3)}$$

Where:

H_{CSR} = mass of organic HAP emissions reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the compliance period, kg.

A_I = total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1A of this section.

B_I = total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1B of this section.

C_I = total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1C of this section.

R_V = volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) [Reserved]

(j) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during the compliance period, using Equation 2 of §63.4151.

(k) *Calculate the organic HAP emission rate.* Determine the organic HAP emission rate to the atmosphere, kg organic HAP per liter coating solids used during the compliance period, using Equation 4 of this section.

$$H_{HAP} = \frac{H_e - \sum_{i=1}^{q}\left(H_{C,i}\right) - \sum_{j=1}^{r}\left(H_{CSR,j}\right)}{V_{st}} \qquad \text{(Eq. 4)}$$

Where:

H_{HAP} = organic HAP emission rate to the atmosphere during the compliance period, kg organic HAP per liter coating solids used.

H_e = total mass of organic HAP emissions before add-on controls from all the coatings, thinners, and cleaning materials used during the compliance period, kg, determined according to paragraph (e) of this section.

$H_{C,i}$ = total mass of organic HAP emissions reduction for controlled coating operation, i, during the compliance period, kg, from Equation 1 of this section.

$H_{CSR,j}$ = total mass of organic HAP emissions reduction for controlled coating operation, j, during the compliance period, kg, from Equation 3 of this section.

V_{st} = total volume of coating solids used during the compliance period, liters, from Equation 2 of § 63.4151.

q = number of controlled coating operations except those controlled with a solvent recovery system.

r = number of coating operations controlled with a solvent recovery system.

(l) To demonstrate initial compliance with the emission limit, calculated using Equation 4 of this section, must be less than or equal to the applicable emission limit in § 63.4090. You must keep all records as required by §§ 63.4130 and 63.4131. As part of the Notification of Compliance Status required by § 63.4110, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in § 63.4090, and you achieved the operating limits required by § 63.4092 and the work practice standards required by § 63.4093.

§ 63.4162 [Reserved]

§ 63.4163 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in § 63.4090, the organic HAP emission rate for each compliance period determined according to the procedures in § 63.4161 must be equal to or less than the applicable emission limit in § 63.4090. Each month following the initial compliance period described in § 63.4160 is a compliance period.

(b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in § 63.4090, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.4110(b)(6) and 63.4120(g).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.4092 that applies to you as specified in Table 1 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§ 63.4110(b)(6) and 63.4120(g).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation. For the purposes of completing the compliance calculations specified in § 63.4161, you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation. You must not include those materials in the calculation of organic HAP emissions reductions in Equation 1 of § 63.4161.

(d) You must meet the requirements for bypass lines in § 63.4168(b). If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§ 63.4110(b)(6) and 63.4120(g). For the purposes of completing the compliance calculations